extrudates.

More specifically, the inventor experimented with measuring the stiffness of reinforced blown and unblown thermoplastic materials, achieving of a reduction in mass being of interest. However, a massive decrease in flexural modulus was noted with unblown thermoplastics materials which was attributed particularly to the reduced coupling of filler to the core material. Initial experimentation indicated that the modulus for blown reinforced plastic was typically in the region of 1650 MPa (239,500 psi), whereas it was found that similar unblown materials might have a flexural modulus in the region of 4,800 MPa (i.e. 696,000 psi) approximately three times better than when the plastics material was blown. The achieving of this high flexural modulus was made possible as a result of use of equipment referenced on pages 8 and 9 of the specification.

The cited prior art in **Stucky** as noted by the Examiner, states that "the flexural modulus of the preferred board-like members of this invention is less than about 500,000 psi (i.e. 3450 MPa), and generally about 100,000 psi (i.e. 690 MPa) to 450000 psi (i.e. 3,100 MPa)". Claim 1 (as amended) and claim 18 requires a flexural modulus of above 4000 MPa (i.e. 580,000 psi), in preferred practice above 5500 MPa (798,000 psi). Contrary to what was stated by the Examiner, such higher flexural modulus values were not predictable and were only determinable by experimentation when processing combinations of fibre/coupling agent/thermoplastic mix using the processing equipment mentioned in the specification. Such materials were simply not capable of manufacture without such equipment, and could not therefore be contemplated, and therefore not obvious to one having ordinary skill in the art. Indeed, the inventors have subsequently been able to produce products having a flexural modulus in excess of about 7000 MPa.

Although, not a stated requirement in claims 1 and 18, the present invention is, in practice, based on hollow section since these provide appropriate weights for manual handling. Solid sections might also be employed but may proved to be too heavy overall. Certainly, such hollow sections cannot be manufactured using blown plastics material.

Should the Examiner feel that a telephone conference would advance the prosecution of this application, he is encouraged to contact the undersigned at the telephone number listed below.

Applicant respectfully petitions the Commissioner for any extension of time necessary to render this response timely.

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Please charge any fees due or credit any overpayment to Deposit Account No. 50-0694.

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, on July 26, 2002.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Smith, James Leonard

SERIAL NO: 09/856,781 GROUP ART UNIT: 3635

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FOR: "Load Bearing Structures"

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Copy of Amendments Showing Changes

The application has been amended in the foregoing amendment to read as follows (added matter is underlined and omitted matter is in brackets):

IN THE CLAIMS:

-- 1. (Amended) A load bearing structural element extruded from a thermoplastic plastics material which is compounded so that the element has a flexural modulus of [400] 4000 Mpa or above.

2. An element as claimed in claim 1, which has a flexural modulus of 5500 Mpa or above.

3. An element as claimed in claim 1, which has a ratio of flexural modulus in Megapascals to density in kg/m^3 of at least 2.5:1.

4. An element as claimed in claim 3, wherein said ratio is at least 4.2:1.

5. An element as claimed in claim 1, which comprises from 30-90 wt% of thermoplastic polymer and 25-50 wt% of an elastic modulus increasing material.

6. An element as claimed in claim 1, wherein the thermoplastic polymer is polyethylene, polypropylene or polyethylene terephthalate.

7. An element as claimed in claim 6, wherein the thermoplastic polymer is bi-axially oriented polypropylene.

8. (Amended) An element as claimed in claim 1, wherein the [thermosplastic] thermoplastic plastics material is a recycled material.

9. An element as claimed in claim 1 which contains glass fibres as an elastic modulus increasing material.

10. An element as claimed in claim 9, wherein the glass fibres have a length of at least 5 mm.

11. An element as claimed in claim 10, wherein the glass fibres have a length of 8-12 mm.

12. An element as claimed in claim 9 wherein the glass fibres are oriented in planes parallel to a load bearing surface thereof.

13. (Amended) An element as claimed in claim 1, which has compounded with the [thermosplastic] thermoplastic plastics material at least one substance selected from fire retardants, UV stabilisers and/or friction increasers.

14. An element as claimed in claim 1 which has at least one substance selected from fire retardants, UV stabilisers and/or friction increasers present in an outer layer which has a thickness of up to 1 mm.

15. (Amended) An element as claimed in claim 14, wherein the outer layer is formed from thermoplastics plastic material containing the at least one substance and co-extruded with the remainder of the material forming said element.

16. An element as claimed in claim 1, which has a co-extruded outer layer which has anti-slip character.

17. An element as claimed in claim 1 wherein the compounded thermoplastic plastics material contains a coupling agent and/or a nucleating agent in amounts of from 1 to 3 wt% and

0.1 to 2 wt% respectively.

18. (Amended) A method of providing access by foot to a main location to which access is required, which comprises providing access by foot to a first location and locating between the first [a freely accessible] location and the main location, so as to have [to which access is required so as to be supported in such a way that] an unsupported span [exists] existing between support positions, a platform structure which resists static and/or dynamic loading, characterized in that the platform structure is formed as a thermoplastic plastics extrudate which is compounded so that the structure has a flexural modulus of at least 4000 Mpa.

19. A method as claimed in claim 18, wherein the compounded plastics extrudate has a flexural modulus of 5500 Mpa or above.

20. A method as claimed in claim 18, wherein the ratio of flexural modulus in Megapascals to density in kg/m^3 of plastics material of the compounded plastics material is at least 2.5:1.

21. A method as claimed in claim 20, wherein said ratio is at least 4.2:1.

22. (Amended) A method as claimed in claim 18, wherein the compounded plastics extrudate comprises from 30-90 wt% of [thermosplastic] thermoplastic polymer and 25-50 wt% of an elastic modulus increasing material.

23. A method as claimed in claim 18, wherein the thermoplastic polymer is polyethylene, polypropylene or polyethylene terephthalate.

24. A method as claimed in claim 23, wherein the thermoplastic polymer is bi-axially oriented polypropylene.

25. A method as claimed in claim 18, wherein the thermoplastic plastics material is a recycled material.

26. A method as claimed in claim 18, wherein the compounded plastics extrudate

contains glass fibres as an elastic modulus increasing material.

27. A method as claimed in claim 26, wherein the glass fibres have a length of at least 5mm.

28. A method as claimed in claim 27, wherein the glass fibres have a length of 8-12 mm.

29. A method as claimed in claim 26, wherein the glass fibres are oriented in planes parallel to a load bearing surface of the compounded plastics extrudate.

30. A method as claimed in claim 18, wherein the plastics extrudate has at least one substance selected from fire retardants, UV stabilisers and/or friction increasers compounded therein.

31. A method as claimed in claim 18, wherein the compounded plastics extrudate has at least one substance selected from fire retardants, UV stabilisers and/or friction increasers present in an outer layer of the structure which has a thickness of up to 1 mm.

32. A method as claimed in claim 31, wherein the outer layer is formed from thermoplastic plastics material containing the at least one substance and co-extruded with the remainder of the material forming said structure.

33. A method as claimed in claim 18, wherein the structure has a co-extruded outer layer which has anti-slip character.

34. A method as claimed in claim 18 wherein the compounded plastics extrudate contains a coupling agent and/or a nucleating agent in amounts of from 1 to 3 wt% and 0.1 to 2 wt% respectively.--